

# Clinician Interpretation Support Environment



## Background

Most clinical laboratory assays are straightforward: cells are sorted and counted, or levels are measured. But some assays measure a factor so indirect that an experienced clinician is required to interpret the raw results. And that experienced clinician needs a very specialized decision-support system, a rich data environment which combines patient demographics, long-term patient history and image data from analyzers (eg graphs, gels or scatter plots). *At the time of this project, such systems were unknown or very new.*

## Business Challenge

The challenge was to provide a highly demanding user group with highly customized software that would allow them to do a high-stress, high-stakes job both accurately and quickly.

## Solution

M+H was given the commission to do a pilot project in the Flow Cytometry area, to prove the concept and see if the client's existing infrastructure could support such this function. Given the gaps in the existing infrastructure, our solution was highly vertical:

- a sophisticated Web UI to support data browsing and entering interpretations
- a powerful data layer combining rich text and a relational database
- a set of system-to-system interfaces to populate that data layer
- an interface to their on-line results archive

## Results

The result was a dramatic improvement in turn-around-time, which in turn led to a dramatic increase in volume.

After initial deployment in the Flow Cytometry area was such a success, M+H was asked to provide similar software to eleven other areas. The great increase in speed was part of all the installations, as was the great rise in volume.

The client tells us that an independent inspector called the Flow Cytometry version "state of the art" at the time, that the client was now "the model" for a Flow Cytometry section as a result.

Consumers of the Special Hematology results called in to verify results at first, assuming that the apparent turn-around time improvement was so great as to be the result of some kind of error.